

REMARKS

Claims 4-13 and 46-55 are currently pending in this application, with claims 4, 9, 46 and 51 being independent. Applicant notes that the Form PTOL-326 ("Office Action Summary") inadvertently lists claims 4-55 as pending, when, in fact, claims 14-45 were previously canceled, along with claims 1-3.

Claims 10, 46, and 48 have been amended to correct informalities. No new matter has been introduced.

Claims 4, 7-9, 12, 13, 46, 49-51, 54, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,147,451 to Shibata et al. (Shibata) in view of U.S. Patent No. 6,518,941 to Kimura (Kimura) and U.S. Patent No. 6,005,350 to Hachiya et al. (Hachiya). Claims 5, 6, 10, 11, 47, 48, 52, and 53 are objected to as being dependent on a base claim, but would be allowable if re-written in independent form.

Regarding the rejection of independent claim 4 under 35 U.S.C. 103(a) as being unpatentable over Shibata in view of Hachiya and Kimura, Applicant respectfully submits that neither Shibata, nor Hachiya, nor Kimura, nor any proper combination of the three, discloses or properly suggests all of the features recited in independent claim 4. More specifically, Applicant submits (1) that neither Shibata nor Kimura discloses the teachings alleged in the Office Action, (2) that no proper motivation has been provided for modifying Shibata in view of Kimura in the described manner, and (3) that no proper motivation has been provided for modifying the combination of Shibata and Kimura in view of Hachiya in the described manner. As a result, Applicant submits that no prima facie case of obviousness has been established, and requests that, accordingly, the rejection of claims 4, 7-9, 12, 13, 46, 49-51, 54, 55 be withdrawn.

For example, independent claim 4 recites, "wherein said source signal line driver circuit comprises a switching circuit for switching a polarity of an output signal, and a polarity of a digital video signal input to said switching circuit is inverted by means of a shift signal to be input into said switching circuit and a resultant signal is then input into said plurality of pixels."

In the rejection, and first regarding point (1) above, the present Office Action states in paragraph 3 that, "Shibata ...teaches...a source signal line driver (FIG. 2 (320 [x-driver])

including a switching circuit for switching by means of a shift signal to a plurality of pixels (FIG. 2 (33) "sample/hold")." Applicant respectfully disagrees.

On this point, Applicant notes that the Office Action of March 10, 2004, in the context of a previous rejection that was also partially based on Shibata, clearly states, in direct contrast to the above quotation, that "Shibata has failed to teach a source signal line driver including a switching circuit for switching a polarity by means of a shift signal to a plurality of pixels" (emphasis added).

Applicant further submits that, for example, the sample/hold circuit 33 of Shibata does not, in fact, disclose or properly suggest the claimed switching circuit, as alleged, because the circuit 33 of Shibata is not described as "switching a polarity of an output signal." That is, for example, the sample/hold circuit 33 of Shibata is described merely as "...sampling and holding video input signal data in accordance with a clock signal ..." (column 3, lines 63-65).

Further regarding point (1), above, the Office Action asserts in paragraph 3 that Kimura discloses that, "it is well known for an EL in which a digital video signal input (FIG. 1 (10210-10213)) to a switching circuit (FIG. 1 (10310-10313)) by means of a shift signal (FIG. 1 (101) to be inputted into said switching circuit (FIG. 1 (10310-10313))." Again, Applicant respectfully disagrees with this description of Kimura.

For example, Applicant submits that the "switching circuit (FIG. 1 (10310-10313))" of Kimura is no more relevant to Applicant's claimed invention than the sample/hold circuit 33 of Shibata. That is, the "shift signal 101" alleged to be present in Kimura is no more than a clock signal to signify transmission of signals on supply lines 10210 through 10213 to source lines 10410-10413 (see column 3, lines 52-56), similar to the clock signals x-clock and x-start of FIG. 3 of Shibata.

Therefore, based on the above, Applicant submits that neither Shibata nor Kimura provides the disclosures or teachings alleged by the Office Action, so that the rejection of claim 4 should be withdrawn for at least this reason.

Regarding point (2), Applicant submits that no proper motivation has been provided for modifying Shibata in view of Kimura, since, aside from the issues discussed above, the Office

Action provides no support or reasoning as to why or how the described modification would serve to “provide an improved luminous intensity of EL elements.” That is, in contradiction to the requirements of, for example, M.P.E.P. 2143.01, the Office Action does not refer to any part of either Shibata or Kimura, or to any common knowledge in the art at the time of the invention, as to why or how the proposed combination of Shibata and Kimura would have been thought to yield this result. Therefore, Applicant submits that no proper motivation has been provided for the combination of Shibata and Kimura.

Finally, regarding point (3), Applicant submits that no proper motivation has been provided for modifying Shibata, as modified by Kimura, in view of Hachiya. In particular, Hachiya is cited as teaching that, “it is conventional to invert the polarity of a signal by (a) switching circuit,” and cites to column 11, lines 37-44 and column 12, lines 31-48 of Hachiya.

Upon review, however, Applicant submits that Hachiya merely discloses a polarity inversion of a power supply for charging or discharging an EL element. See, e.g., FIG. 9 and column 12, lines 37-39 of Hachiya. This function is unrelated to the claimed features for writing data (e.g., a digital video signal) within a light-emitting device, for, for example, reduction of power consumption of the light-emitting device. Therefore, even if Hachiya discloses polarity inversion of a power supply, such a teaching provides no proper suggestion for modifying the claimed source signal line driver circuit and related switching circuit, as recited in claim 4. Moreover, and similar to point (2), above, Applicant submits that the Office Action's stated motivation to combine of, “adjust(ing) the voltage applied on the EL to improve the reliability” is not supported by any showing as to how or why such an advantage would have been suggested, in any of Shibata, Kimura, Hachiya, or the common knowledge available in the art at the time of the invention. or reasoning as to why or how the described modification would serve to “provide an improved luminous intensity of EL elements.”

Since Shibata and Kimura do not provide the teachings alleged by the Office Action, and since no proper motivation has been provided to modify Shibata by Kimura, or to modify Shibata and Kimura by Hachiya, Applicant respectfully submits that independent claim 4 is allowable for at least these reasons.

Similarly, each of the remaining independent claims 9, 46, and 51 recites "a polarity of a digital video signal input ... into said switching circuit is inverted by means of a shift signal to be input into said switching circuit," which, for at least the reasons set forth above, is not disclosed or properly suggested in any of Shibata, Kimura, or Hachiya, or in any proper combination of the three.

Accordingly, Applicant respectfully submits that independent claims 4, 9, 46, and 51 are allowable for at least these reasons. Further, since independent claims 4, 9, 46, and 51 are allowable for the reasons set forth above, Applicant respectfully submits that their respective dependent claims 7, 8, 12, 13, 49, 50, 54, and 55 also are allowable, for at least the same reasons.

As all of the pending claims 4-13 and 46-55 are believed to be in condition for allowance (claims 5, 6, 10, 11, 47, 48, 52, and 53 having already been indicated to contain allowable subject matter, as referred to above), such action is hereby requested in the Examiner's next official communication.

Finally, Applicant thanks the Examiner for initialing and returning the various Forms PTO-1449 previously submitted in this application. Applicant notes that the Form PTO-1449 filed March 9, 2004 included a listing of U.S. Patent Application No. 10/118,917, which was crossed through in the returned version of the form. Applicant further notes that the publication corresponding to the above-identified application, 2002/0154151, was submitted with the IDS of October 7, 2004, so that Applicant believes the information contained in the U.S. Patent Application No. 10/118,917 has been considered.